

ENCLOSURE 1

PIBO IMPLEMENTATION MONITORING PROTOCOL FOR ESTABLISHING DESIGNATED MONITORING AREAS

Preliminary considerations in setting up the designated monitoring area (DMA):

Little or no livestock access or use: By definition, a DMA contains impacts that result principally from livestock grazing. If livestock do not access the stream, then do not establish a DMA.

Use an ID Team: It is preferable that DMAs, as well as their associated endpoint indicator, be identified in an interdisciplinary fashion, including specialists knowledgeable in fish habitat requirements, channel processes, riparian vegetation, and livestock grazing management.

Protocol for setting up the DMA

I. For all Category I pasture use areas (those associated with any RHCA that occurs entirely or partially within a 6th field HUC/subwatershed containing ESA-listed fish species - salmon, steelhead, bull trout - or designated or proposed critical habitat):

- Step 1. Determine if livestock have access to the stream
- Step 2. If livestock DO NOT have access (e.g. exclosure, steep canyon, heavy downed-timber etc.) a designated monitoring area (DMA) is NOT established. At minimum, INFISH/PACFISH standards and guidelines compliance monitoring is required, even if a DMA is not established. Lacking a DMA, implement any of the following kinds of monitoring depending upon which is appropriate to the situation:
 - Use supervision and livestock access
 - Photos documenting lack of access to the stream
 - Fence integrity
 - Compliance with the standards and guidelines of PACFISH/INFISH
- Step 3. If livestock DO have access to the stream.....
 - Locate a DMA where livestock are using areas adjacent to the stream
 - Locate the DMA where livestock use is relatively high, following the premise that if proper management occurs on the DMA, the remainder of the pasture or use area will also be managed within requirements.
 - Select a reach that is most critical in influencing listed fish species.
 - Select a reach that has the greatest potential to respond to management.
 - Avoid reaches that are compounded by other uses (e.g. wild horses, dispersed camping, developed campgrounds, road crossings, etc.)
 - Avoid reaches that are impervious to disturbance (e.g. bedrock or boulder armored stream channels). Reaches in boulder/bedrock that historically contained floodplains of finer substrates, and have the potential to re-build streambanks and stream terraces of finer material, may be established as DMA's for monitoring long-term recovery.
 - Avoid water gaps, cattle crossings, and other localized concentrations of livestock that were established intentionally.

II. DMA location protocol

- Step 1. Record the UTM coordinate on-site at the downstream end of the reach using GPS. Also record the projection (e.g. NAD27).

- Step 2. Permanently monument the downstream end of the DMA reach using post, marker, rebar, etc.
- Step 3. Take a picture of the downstream end of the reach
- Step 4. Prepare a site map or sketch with distinctive features of the site; or delineate the reach on a high-resolution aerial photograph (e.g. National Agricultural Image Project – NAIP)
- Step 5. Using GPS, measure the upstream UTM coordinate on-site, or record the thalweg distance from the downstream monument to the upstream end.

III. DMA reach definition

- Step 1. Measure the reach using the exact same distance as used by the PIBO EM Project: 120 meters thalweg length.
- Step 2. Measure implementation monitoring indicators (e.g. stubble height, bank alteration, woody browse) on both sides of the stream reach.
 - Exclude islands
 - Measure on the greenline or first perennial vegetation above the channel
 - Use an established protocol (e.g. MIM, Interagency Tech Reference, Winward 2000, etc. as suggested by the National Riparian Service Team – see the NRST’s Riparian Vegetation Monitoring Protocol Report of 2/19/05).

IV. Questions & Answers

- **What if the DMA is altered/lost due to construction of a beaver dam?** The DMA reach is re-located to an appropriate section of channel. Select a reach that most duplicates the characteristics of the previous DMA. Use the data from the previous DMA and conduct a site-visit to find a reasonable comparison.
- **What if the DMA is altered by a flood that changes the channel condition or moves it to a new location.** Flood disturbance is a natural process that must be factored into any long-term monitoring scheme. Normally you would retain the existing DMA reach location, unless the new channel makes monitoring more effective in another location, based on the criteria for DMA location listed above.
- **What if reaches with relatively higher livestock use do not coincide with any reach that is sensitive with respect to listed fish habitat?** Select the reach that has relatively high livestock use.
- **What if the watershed does not contain ESA-listed fish, do I still need a DMA?** DMA’s in Category II pasture use areas are optional under the Biological Opinions. However, implementation monitoring is strongly encouraged in Category II pasture use areas being monitored by the PIBO EM Project. If a field unit gives a DMA location to the EM Project, it is expected that that DMA will also receive implementation monitoring.
- **We have numerous Category I pasture use areas and simply cannot establish a DMA on all of them. What if PIBO EM selects one of those in which we have not established a DMA?** Monitoring at PIBO EM sites is the priority for PIBO Implementation Monitoring. Allocation of resources to monitoring is the decision of the line officer. If for any reason you are not capable of implementation monitoring in a HUC selected by the PIBO EM Project, and that HUC contains livestock grazing in any riparian habitat conservation area, do NOT provide a DMA location to the PIBO EM Project. Once a DMA is provided to the EM Project, implementation monitoring at that DMA is mandatory. If possible, resolve this deficiency with the line manager.
- **When do I have to use the Implementation Monitoring Module?** All Implementation Monitoring data collected at EM Project DMA’s must be reported using the Module. That includes INFISH/PACFISH standards and guides compliance, use supervision, spot checks,

DMA monitoring results, fence integrity, livestock access evaluations, unauthorized use, and any other kind of implementation monitoring relevant to livestock management of the pasture.

- **What if my DMA is not properly located?** The DMA should be re-located if it is not positioned where it can not assess change due to management. The ID Team must ask itself, “*does monitoring at the DMA truly reflect the effect of grazing management in this pasture?*” If not, move it. Whenever a DMA is re-located, the first year’s assessment of the new DMA should be calibrated with the old DMA. Endpoint measurements at both the old and new DMA’s should be made concurrently and compared to evaluate trend information.
- **Do I really need to take all of these steps to locate a DMA?** Yes, most of the time, to address the key monitoring questions. In a minority of cases, livestock use intensity and stream habitat sensitivity are distributed evenly over the length of the pasture. In such instances the site can be randomly located.